United States Department of the Interior

NATIONAL PARK SERVICE
Glacier National Park
West Glacier, Montana 59936

IN REPLY REFER TO:
D30

May 21, 1999

Mr. Greg Warren
United States Forest Service
Flathead National Forest
1935 3rd Avenue East
Kalispell, Montana 59901

Dear Mr. Warren:

The steps required to permanently repair the Quarter Circle Bridge - Middle Fork of the Flathead Wild and Scenic River Corridor are included as an attachment to this letter.

Should you have any questions regarding this memorandum, please do not hesitate to contact Mr. John K. Kilpatrick, Chief of Facility Management, at 406-888-7977.

Sincerely,

for Charles P. Jacobs

David A. Mihalic
Superintendent

Enclosures:
Steps to repair Quarter Circle Bridge
Plans maps
Biological assessment
Drawings

STEPS TO REPAIR QUARTER CIRCLE BRIDGE

Need, Purpose and Proposed Activity (steps 1-3):

The Quarter Circle Bridge crosses Lower McDonald Creek near its confluence with the Middle Fork of the Flathead River (see location and plans maps, attached). The bridge is not located on the Middle Fork of the Flathead River, but does fall within the wild and scenic river corridor. The bridge was originally constructed in 1930 to provide access to the Flathead River Ranger Station. Today, the bridge is an integral part of park and concession operations, provides seasonal access to 15 tracts of privately owned land and the park's Apgar/Headquarters water system on the west side of the creek. Over the years, the bridge has been subject to periodic damage from hydraulic events. In 1964 the bridge was severely damaged during a 500-year flood event. In 1974, the wood decking was damaged in a 50-year flood event. In February 1996, ice jams on the Middle Fork of the Flathead River backed up into Lower McDonald Creek, severely damaging the structural stability of the bridge.

Glacier National Park requested the Federal Highway Administration to perform a structural inspection of the bridge, estimate the costs of repairs, provide recommendations for repairs and/or replacement, and act as project manager for the actual repairs. A determination was made that the bridge was eligible for Emergency Relief for Federally-Owned (ERFO) roads program funding. A Disaster Identification No. MT 96-2NPS was assigned.

Due to the severity of the structural damage, temporary emergency repairs were made to the bridge. At that time the USFS approved the temporary repairs within the Wild and Scenic River Corridor (see Flathead National Forest letter dated June 26, 1996, file code 2350, signed by Joel D. Holtrop, Forest Supervisor). The temporary repair added a significant number of screw piles to stabilize the bridge.

The proposed repair (drawings attached) to the Quarter Circle Bridge will remove the existing failed original piles, timber decking, support girders and the temporary screw piles. The project will install improved bridge abutments, new driven piles, and new support girders and decking. The effect of the project will be that a new bridge will be constructed imitating the curve and look of the old Quarter Circle Bridge. It is expected that the project will take approximately 15 weeks to complete. Restrictions include limiting the times piles may be driven to between 8:00 a.m. and 6:00 p.m., general construction is allowed between 6:00 a.m. and 10:00 p.m. in accordance with NPS Special Directive 93-4, revised guidelines for National Park Service floodplain compliance, for implementing Executive Orders 11988 and 11990. Under section 5b of this special directive, bridges are considered an excepted action. In addition, under Directors Order No. 77-1, Wetland Protection, maintenance, repair and renovation of existing facilities or structures that were completed or under construction prior to May 28, 1980, can be excepted. *There is no other functional alternative for this location.* The park's major potable water system, Rubideau Springs, is accessed by this bridge and periodically heavy equipment exceeding 10 tons is needed for the maintenance of the water supply structures.

Within Channel Conditions (step 4):

The project as proposed and described in the foregoing description will improve the in channel conditions by removing approximately 54 to 56 wood and steel pilings and replacing them with 18 steel-driven pilings filled with concrete. The contract drawings provide a cross-sectional description and plan view of the channel geometry and hydraulic data (RG2679-A and RG2679-B).

Describe how the project will directly alter riparian or floodplain conditions (step 5).

a. What is the position of the proposed activity relative to the riparian area and floodplain?

The project is in the floodplain of the river and in a riparian area upstream from the confluence of McDonald Creek and the Middle Fork (see attached map).

b. Does the proposed activity result in changes (vegetation, soil, floodplain etc.)?

The proposed project will have no effect on previously undisturbed vegetation, soil or floodplain properties since it is for the replacement of an existing structure. The construction zone lies mostly within an existing parking lot. The contractor or the park's restoration staff will restore all temporary effects from the reconstruction. Floodplain properties will remain unchanged as the proposed replacement does not change flow characteristics from that which exists at present.

Describe how the proposed activity will directly alter upland activities (step 6):

a. What is the position of the activity relative to the uplands?

The project is located within the floodplain of McDonald Creek and the Middle Fork (see attached map). The west abutment of the bridge is currently and will continue to be in the proposed project, adjacent to an upland area. The east abutment is approximately 150 meters from an upland bench delineating the floodplain.

b. Does the proposed activity result in changes in (vegetation, soil, hydrologic properties)?

The project will have no effect on vegetation, soil or hydrologic properties relative to the upland environment. The project is taking place in an existing disturbed area with road access and a small, paved parking lot already at the site. There will be no change in upland drainage patterns or the character of surface or subsurface flows.

c. Will changes in upland conditions influence archeological, cultural or other identified significant resource values?

This project will entail no changes in upland conditions.

Evaluate and describe how changes in on-site conditions can/will alter existing hydrologic or biologic processes (step 7):.

a. Does the proposed activity affect:

1 . Ability of the channel to change course or inundate its floodplain?

As noted, this is a replacement of an existing bridge, on a tributary of the recreational portion of a Wild and Scenic River. When the original Quarter Circle Bridge was built in 1930, the ability of lower McDonald Creek to change at this location was significantly diminished by the bank stabilization and approach road construction that occurred. This project will not change this characteristic.

2. Stream bank erosion potential, sediment routing or debris loading?

This proposal will have no new effect on stream bank erosion potential, sediment routing or debris loading since flow characteristics of the new bridge are same as the existing bridge. See remarks below.

3. The amount or timing of flow in the channel?

No change.

4. Existing flow patterns?

No change.

5. Surface or sub-surface flows?

No change.

6. Food storage?

N/A

7. Aggradation or degradation of the channel?

No change since there is no change in the footings or bank stabilization/configuration.

b. Does the proposed activity affect biological processes?

There should be no long-term affect on biological processes. Biological processes may be minimally affected during construction; however, these affects should be significantly reduced by timing and seasonal restrictions on construction. It should be noted that four listed and one proposed listed species are known to frequent this area. Please see the attached biological evaluation concerning the effects on listed species. Glacier is awaiting the result of consultation with the USFWS.

Estimate the magnitude and spatial extent of potential off-site changes:

a. Consider and document:

1. Changes that influence other parts of the river system.

There will be no long-term changes from the existing conditions. There will be short-term effects such as minor increases in sediment and minor disturbances to recreational activities such as construction noise. There will be no disruption of floating access on the Middle Fork but floating access on McDonald Creek will be affected for a short period during construction.

AZS

2. The range of circumstances under which off-site changes might occur.

There should be no alteration or interruption of flow. Flow improved through overall reduction in number of insertion piles.

3. The probability or likelihood that predicted changes will be realized.
N/A

b. Specify processes involved such as water, sediment, movement of nutrients.

c. As noted above, there may be a short-term increase in sediment as a result of construction; namely, the removal of the old driven piers and their replacement. All construction activities will be regulated by Federal and State Water quality permits.

Define the time scale over which steps 3-7 are likely to occur (step 8):

a. Review steps 3 - 7 looking independently at the element of time.

The project is scheduled to begin June 21, 1999 and last until October 15, 1999. The schedule of activities is defined in the need, purpose, and proposed activity section. The contract will require a schedule to be submitted in accordance with the time and duration schedules. These will be strictly adhered to.

b. Consider whether conditions, processes or effects are temporary or persistent.

The effects should be temporary and have no long-term change from existing conditions.

Compare project analysis to management goals and objectives (step 9):

The project is intended to replace an existing structure on a tributary of the Middle Fork of the Flathead, that pre-dates the designation of the Wild and Scenic River corridor and is acknowledged in the designation of the nearby section as "recreational." There should be no long-term affects on McDonald Creek or the Middle Fork and no change to existing flows, water quality, riparian areas, floodplain conditions or any other outstanding, remarkable or other significant resource values. The location and configuration of the new bridge is almost identical to the old, keeping a very low profile when viewed up McDonald Creek from the Middle Fork.

Section 7 Determination (step 10):

Free Flowing Status

This project, on the tributary to the Middle Fork of the Flathead River, is likely to improve characteristics of the creek. The proposed bridge meets the profile of the existing bridge with a net reduction of in-stream pilings.

Water Quality

The proposed contract plans and specifications include significant measures to protect water quality during construction. Installation of absorbent booms, silt fencing, and sand bag cofferdam(s) are contract items. The installation of abutment #2 is the only feature that is constructed below ordinary high water. Special biodegradable/nontoxic circulating and hydraulic fluid will be required for use in pile driving equipment. The contractor can only work between June 21 and October 15 with work occurring within the wetted perimeter between July 15 and September 15. Areas disturbed by construction activities will be revegetated as part of the project. The Department of Transportation, Federal Highway Administration will obtain all necessary permits to work within the stream channel. These will include permits from the Flathead Regional Development Office, Montana Fish Wildlife and Parks, and the Corps of Engineers.

Recreation

The immediate bridge site as well as the Middle Fork of the Flathead receives considerable recreational use. Lower McDonald Creek is popular with canoeists who often take out at an informal river access site immediately upstream from the bridge on Lower McDonald Creek. The bridge is also a popular fishing spot.

During the removal of the existing structure and construction of the replacement bridge, the river access will be closed to use. The McDonald Creek tributary will be signed to restrict boating down the stream due to safety concerns. The Middle Fork of the Flathead is used by boating enthusiasts primarily by floaters (rafts, canoes, kayak) during the period between May and September. There is some commercial use by stock concessioner who will be provided with alternative routes.

Recreationists in the area will be effected by the project. Effects will be for one season and include construction noise and visibility of the project. Pile driving will be restricted to the hours between 8 a.m. and 6 p.m. and is expected to take 3-4 weeks to complete. In the long term, the project will provide for the continuation of recreational values identified inherent with the Middle Forks addition to the Wild and Scenic River System.

Cultural Resources

There are no known or suspected cultural resources in the immediate vicinity of the bridge site and therefore is not an undertaking as defined in Section 106 of the National Historic Preservation Act.

Geology

There are no known geologic features of significance that contribute to the scenic quality of the area that will be affected by the project.

Fish and Wildlife

Glacier National Park staff have prepared a Biological Evaluation stating that the project is not likely to adversely affect the five ESA-listed species, and one proposed species, known to inhabit or traverse the area of activity associated with the replacement of the Quarter Circle Bridge. The species are bull trout, bald eagle, peregrine falcon, grizzly bear and gray wolf. The Canada lynx is also considered in the assessment. The above species were included in the establishment of work periods allowed in the contract. The Biological Evaluation is currently under review by the USFWS.

Other Unique Features

There are no other known special or unique features within this recreation section of the Middle Fork of the Flathead Wild and Scenic River Corridor that will be adversely effected by this bridge replacement project.

Conclusion

The Quarter Circle Bridge was constructed prior to the addition of the Middle Fork of the Flathead River to the Wild and Scenic River System. This project is the replacement of that structure. Furthermore, the proposal will not lessen the values and qualities inherent with this segment of the Wild and Scenic River.

Filename: Qcb
Directory: \\Gnp1\vol2\USERS\DKH
Template: C:\MSOffice\Templates\Normal.dot
Title: United States Department of the Interior
Subject:
Author: National Park Service
Keywords:
Comments:
Creation Date: 05/04/99 1:03 PM
Revision Number: 1
Last Saved On: 05/22/99 2:05 AM
Last Saved By: National Park Service
Total Editing Time: 0 Minutes
Last Printed On: 06/16/99 11:58 PM
As of Last Complete Printing
Number of Pages: 8
Number of Words: 2,138 (approx.)
Number of Characters: 12,190 (approx.)

D30

June 16, 1999

Mr. Greg Warren
United States Forest Service
Flathead National Forest
1935 3rd Avenue East
Kalispell, MT 59901

Dear Mr. Warren,

Reference is made to the proposed repairs on the Quarter Circle Bridge located in Glacier National Park. Reference is also made to the Section 7 consultation required for Wild and Scenic River Corridors.

The Quarter Circle Bridge is located within the Wild and Scenic River corridor of the Middle Fork of the Flathead River. I have attached hereto the documentation required for your evaluation of the proposed repairs to the referenced bridge and their effects on the Wild and Scenic River corridor.

Your response and attention to this matter is greatly appreciated. As a matter of further information, the Environmental Assessment will be released for public review within the next couple of weeks. We will be sure to forward you a copy of this document.

Should you have any further questions, please do not hesitate to contact Mr. John K. Kilpatrick, Chief of Facility Management, 406-888-7977.

Sincerely,

DM

Filename:	usfs02
Directory:	\\GNP1\VOL2\USERS\MAINT
Template:	C:\Program Files\MSOffice\Templates\Normal.dot
Title:	
Subject:	
Author:	Preferred Customer
Keywords:	
Comments:	
Creation Date:	06/16/99 11:52 AM
Change Number:	2
Last Saved On:	06/16/99 11:58 AM
Last Saved By:	Preferred Customer
Total Editing Time:	6 Minutes
Last Printed On:	06/16/99 11:58 AM
As of Last Complete Printing	
Number of Pages:	1
Number of Words:	157 (approx.)
Number of Characters:	895 (approx.)